

REMARKS

Claims 1 and 10 are amended in order to more particularly point out, and distinctly claim the subject matter which the Applicants regard as their invention. The Applicants respectfully submit that no new matter has been added. It is believed that this Amendment is fully responsive to the Office Action dated October 15, 2009.

Independent Claim 1, as amended, is to a nozzle for coloring an electric wire, which spouts a liquid coloring agent with a specific amount thereof per spouting toward an outer surface of the electric wire so that a liquid drop of the coloring agent adheres to the outer surface of the electric wire. The nozzle includes a receiver for receiving the coloring agent therein, a first nozzle part formed in a cylindrical shape for allowing the coloring agent to pass therethrough, the first nozzle part communicating with the receiver, the first nozzle part being coaxial with and separate from the receiver, and a second nozzle part formed in a cylindrical shape having an inner diameter smaller than that of the first nozzle part for allowing the coloring agent to pass therethrough, and an outer diameter equal to that of the first nozzle part. The second nozzle part is connected to the first nozzle part, the second nozzle part is disposed nearer to the electric wire than the first nozzle part is disposed, and between the first and second nozzle parts there is formed a step protruding inwardly between the first nozzle part and the second nozzle part.. Independent Claim 10, as amended, is to a nozzle for coloring an electric wire, which spouts a liquid coloring agent with a specific amount thereof per spouting toward an outer surface of the electric wire so that a liquid drop of the coloring agent adheres to the outer surface of the electric wire. The nozzle includes a receiver for receiving

U.S. Patent Application Serial No.10/560,832
Reply to OA dated October 15, 2009

the coloring agent therein, a first nozzle part formed in a cylindrical shape for allowing the coloring agent to pass therethrough, the first nozzle part communicating with the receiver, the first nozzle part being coaxial with and separate from the receiver, and a second nozzle part formed in a cylindrical shape for allowing the coloring agent to pass therethrough. The second nozzle part has an outer diameter equal to that of the first nozzle part and is connected to the first nozzle part, where the second nozzle part is disposed nearer to the electric wire than the first nozzle part is disposed, and the second nozzle part is made of polyetheretherketone.

In the Office Action, Claims 1-9 were objected to because of the phrase “wherein between the first and second nozzle parts there is formed a step protruding from an inner surface of the first nozzle part toward the inside of the first nozzle part.” It is asserted that it is unclear as to how the inside of the first surface protrudes into itself.

Claim 1 has been amended to provide that between the first and second nozzle parts there is formed a step protruding “inwardly between the first nozzle part and the second nozzle part”. This should remove the objection in paragraph 5 of the Office Action.

In the Office Action, Claims 1-5 were rejected as anticipated under 35 U.S.C. 102(b) by Fortin (U.S. 2,563,231); Claims 6-8 were rejected as obvious under 35 U.S.C. 103(a) in view of that reference; and Claims 9 and 10 were rejected as obvious in view of a combination of Fortin and Rau (U.S. 4,897,439). Reconsideration and removal of these rejections are respectfully requested in view of the present amendments to Claims 1 and 10 and the following remarks.

U.S. Patent Application Serial No.10/560,832
Reply to OA dated October 15, 2009

The Office Action asserts that Fortin shows a nozzle that spouts a liquid of a specific amount toward an outer surface comprising a receiver (104), a first nozzle part (100) formed in a cylindrical shape for allowing the liquid to pass through that communicates with the receiver (104), a second nozzle part (132) formed in a cylindrical shape having an inner diameter (132) smaller than that of the first nozzle part (100), the second part (132) being connected to the first nozzle part (100) and being disposed closer to the application object than the first part (100). Between the first (100) and second (132) nozzle parts in the nozzle of Fortin there is a step protruding from an inner surface of the first nozzle part (100) toward the inside of the second nozzle part (132). It is asserted that the nozzle of Fortin has a step formed flat in a direction at a right angle to the direction of liquid flow in the first and second nozzle parts, the nozzle has a step formed flat in a direction crossing the direction of liquid flow in the first (100) and second (132) nozzle parts and a direction crossing at right angles to the direction of liquid flow, the nozzle has a step formed on the first and second parts, and the nozzle has a first part and a second part that are connected coaxially to each other.

With respect to Claims 6-8, the Office Action asserts that Fortin shows a nozzle having a first and a second part and, while Fortin does not specify the precise ration of the length (L) of the first part (100) to the length (l) of the second (132) part, the use of a first part (100) of length L and a second part of length l (132) such that $8 \leq L/l \leq 10$ would be obvious. Also, while Fortin does not show the precise ratio of the diameter (D) of the first part (100) to the diameter (d) of the second (132) part, it is alleged that it would be obvious that nozzles satisfying the condition $4 \leq D/d \leq 6$ could be used, as well as nozzles that simultaneously satisfy the condition $8 \leq L/l \leq 10$ and $4 \leq$

U.S. Patent Application Serial No.10/560,832
Reply to OA dated October 15, 2009

D/d ≤ 6.

The Rau reference is cited to show the use of polyether ketone (PEK) for its variety of useful properties and such use in the present nozzle is alleged to be obvious.

There are important differences between the present nozzle and that of Fortin, and Claims 1 and 10 have been amended to emphasize those differences.

For example, in Fortin, the Office Action alleges that a central passage (104) is comparable to the receiver of the present claims. The element (104) is, however, the nozzle bore of nozzle part (100), while in the present device, the first nozzle part is coaxial with and separate from the receiver. The claims have been amended to specify this distinction. Also, in the present nozzle, the outer diameter of the second nozzle part is equal to the outer diameter of the first nozzle part, whereas in Fortin, the alleged second nozzle (cap 130) has threads on the inner wall that mate with threads on the outer wall of the primary body member (100).

In Fortin, the central passage (104) is not a receiver for coloring agent but retains a sleeve member (126) of cylindrical member (102), and the inner diameter of the sleeve member (126) is less than that of the boring (132) of the cap (alleged second nozzle), the opposite of the nozzle of Claim 1 where second nozzle has an inner diameter smaller than that of the first nozzle.

The Rau reference does not cure the defects of Fortin. In Rau, PEEK, as well as other polyether resins are suggested for use in a coating composition or fused articles, having a fluorocarbon resin and an additive. The Office Action asserts that PEEK is non-corrosive. There is no teaching or suggestion in Rau, however, that the use of PEEK in the second nozzle part of the

U.S. Patent Application Serial No.**10/560,832**
Reply to OA dated October 15, 2009

present claimed device would provide a nozzle part where coloring agent hardly adheres to the second nozzle member and one where the coloring agent with a specific amount thereof per spouting can be spouted, as evidenced in Table 3 of the present specification.

In view of the aforementioned amendments and accompanying remarks, Claims 1-10, as amended, are believed to be patentable and in condition for allowance, which action, at an early date, is requested.

If, for any reason, it is felt that this application is not now in condition for allowance, the Examiner is requested to contact the Applicants' undersigned agent at the telephone number indicated below to arrange for an interview to expedite the disposition of this case.

U.S. Patent Application Serial No.10/560,832
Reply to OA dated October 15, 2009

In the event that this paper is not timely filed, the Applicants respectfully petition for an appropriate extension of time. Please charge any fees for such an extension of time and any other fees which may be due with respect to this paper, to Deposit Account No. 01-2340.

Respectfully submitted,

KRATZ, QUINTOS & HANSON, LLP


for William G. Kratz, Jr. 27193
Attorney for Applicant
Reg. No. 22,631

WGK/ak

Atty. Docket No. **050826**
Suite 400
1420 K Street, N.W.
Washington, D.C. 20005
(202) 659-2930



23850
PATENT & TRADEMARK OFFICE